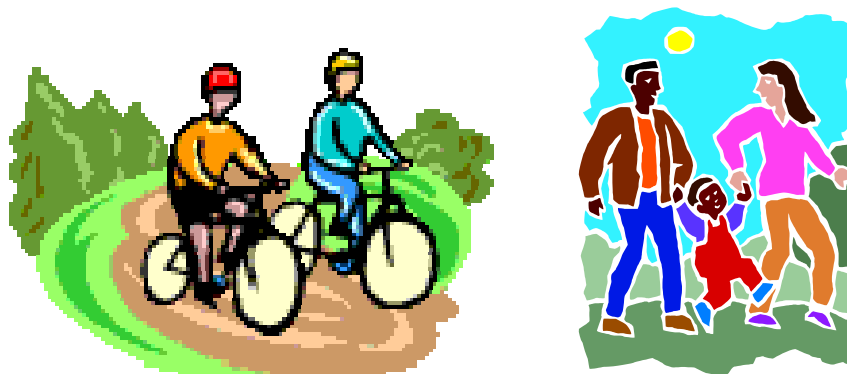


Michigan Pedestrian and Bicycle Safety Action Plan



Governor's Traffic Safety Advisory Commission

Member Agencies:

Michigan Department of Transportation
Office of Highway Safety Planning
Michigan Department of State
Michigan Department of State Police
Office of Services to the Aging
Michigan Department of Education
Michigan Department of Community Health

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Pedestrian and Bicycle Safety Introduction

Pedestrian and bicycle crashes and the resulting deaths and injuries represent a serious problem on our highways and roadways.

The American Association of State Highway and Transportation Officials' (AASHTO, 2001) *A Policy on Geometric Design of Highways and Streets* (also called the Green Book) states:

"Pedestrians are a part of every roadway environment, and attention should be paid to their presence in rural as well as urban areas...pedestrians are the lifeblood of our urban areas, especially in the downtown and other retail areas."

The National Cooperative Highway Research Program (NCHRP) Report 500, Volume 10, *A Guide for Reducing Collisions Involving Pedestrians* (Zeeger, Stutts, et al., 2004), states:

"Walking is a basic human activity, and almost everyone is a pedestrian at one time or another...Even though pedestrians are legitimate roadway users, they are frequently overlooked in the quest to build more sophisticated transportation systems. Whether building new infrastructure or renovating existing facilities, it should be assumed that people will walk, and plans should be made to accommodate pedestrians. Where people aren't walking, it is often because they are prevented or discouraged from doing so."

"Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes." Federal Highway Administration (FHWA) Program guidance on TEA-21

The National Center for Chronic Disease and Health Promotion (CDC) is providing support to increase the number of policy and environmental changes to encourage people to be more physically active. CDC's goals are to encourage the development of pedestrian and bicycle friendly environments and promote active forms of transportation like walking and bicycling.

The transportation and health agencies have pedestrian and bicycle promotion and safety in common.

The new Federal Highway Bill, SAFETEA-LU, includes an emphasis on the Safe Routes to School Program, with large yearly allocations to each state. This program aims to promote walking and bicycling to school around the country. Section 1404 of this transportation reauthorization bill created a new, Federally funded, Safe Routes to School program that provides specific funding to States to administer SR2S programs at the local level.

Action Plan Development

In 1998, the American Association of State Highway and Transportation Officials (AASHTO) approved its Strategic Highway Safety Plan, which was developed by the AASHTO Standing Committee for Highway Traffic Safety with assistance of the Federal Highway Administration, the National Highway Traffic Safety Administration, and the Transportation Research Board Committee on Transportation Safety Management. The aim of the plan was to identify emphasis areas and strategies that would substantially reduce the incidence of vehicle-related fatalities and injuries. The overarching goal of the plan is to reduce the annual crash fatality rate to no more than 1.0 fatality per 100 million vehicle miles traveled (100M VMT) by 2008.

The National Cooperative Highway Research Program (NCHRP) provided guidance documents for the implementation of the AASHTO Strategic Highway Safety Plan. The NCHRP Report 400, Volume 10, *A Guide for Reducing Collisions Involving Pedestrians* includes a brief introduction, a general description of the problem, the strategies/countermeasures to address the problem, and a model implementation process.

The Michigan Pedestrian and Bicycle Safety Action Plan was created using the above documents and resources as a base foundation.

Nationwide Background

Nationwide, there were 4,641 pedestrian fatalities in 2004, and 68,000 pedestrians injured in traffic crashes. On average, a pedestrian is killed in a traffic crash every 113 minutes and injured in a traffic crash every 8 minutes. Pedestrian deaths accounted for 12 percent of all traffic fatalities and four percent of all injuries in traffic crashes. In 2004, 725 bicyclists were killed and an additional 41,000 were injured in traffic crashes. On average, a bicyclist is killed every 12 hours and injured every 13 minutes in a traffic crash. Bicyclist deaths accounted for two percent of all traffic fatalities, and bicyclist made up one percent of all people injured in traffic crashes during the year. (Source: NHTSA – Traffic Safety Facts 2004 Data).

The need to reduce pedestrian/bicyclist deaths and injuries, even in the face of ongoing efforts to increase levels of walking and biking, continues to be an important goal for the highway safety and public health professions. Specific groups that do not or cannot drive primarily depend on walking and bicycling for transportation, including children, the elderly and low-income populations. These individuals comprise up to 30 percent of the population in many communities and are particularly in need of a safe walking/biking environment to help lower their risk of injury and death. The United States is aging- its older population will double over the next 30 years. By 2030, one in five Americans will be 65 or older. As the number of older people continues to increase, important issues affecting this population segment need to be addressed.

Michigan Background and Strategic Plan

The development of a Strategic Highway Safety Plan was commissioned by Michigan's Governors Traffic Safety Advisory Commission (GTSAC) in October 2004. The GTSAC

consists of the Governor (or a designee), the Directors (or their designees) of the Departments of Community Health, Education, State, State Police, and Transportation, the Office of Highway Safety Planning, the Office of the Services to the Aging, and three local representatives from the county, city, and township level. The GTSAC formed a comprehensive highway safety work group consisting of the following agencies: AAA Michigan, Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Michigan Center for Truck Safety, Michigan Department of Community Health (MDCH), Michigan Department of Information Technology (MDIT), Michigan Department of State (MDOS), Michigan Department of State Police (MSP), Michigan Department of Transportation (MDOT), Michigan Sheriff's Association (MSA), Mothers Against Drunk Driving (MADD), Office of Highway Safety Planning (OHSP), Office of Services for the Aging, Road Commission of Macomb County, and Southeast Michigan Council of Governments (SEMCOG).

Pedestrian and bicycle issues were identified as emphasis areas in both the AASHTO and GTSAC Strategic Highway Safety Plans. The Pedestrian and Bicycle Action Team, a GTSAC sub-committee consisting of a multi-disciplinary group of agencies and disciplines was asked to address this emphasis area. Many issues and strategies from the national and state agenda are incorporated into this Michigan Pedestrian and Bicycle Safety Action Plan.

As the importance of physical activity, safety and accessibility has been realized, the State of Michigan has become focused on creating multi-modal routes that are safe for pedestrians, bicyclists and motor vehicle drivers of all ages and abilities. The following statistics provide a snapshot of the pedestrian/bicyclist safety issues within Michigan in 2004:

- 2,727 pedestrians involved in motor vehicles crashes, with 141 pedestrians killed and 2,308 injured. Children under 16 years of age accounted for 12 (16.4%) of the pedestrian deaths in 2004. Adults over the age of 54 accounted for 41 (29.3%) of the pedestrian deaths in 2004. (Source: Office of Highway Safety Planning).
- 2,224 bicyclists involved in motor vehicle crashes, with 21 bicyclists killed and 1,794 injured. Children under 16 years of age accounted for 7 (33%) of the bicycle deaths in 2004. (Source: Office of Highway Safety Planning).
- 38 (27%) pedestrian fatalities and 661 (29%) pedestrian injuries occurred in the City of Detroit. For perspective, the city of Detroit has a population that is about 10% of the statewide population.
- 47 (34%) pedestrian fatalities and 878 (38%) pedestrian injuries occurred in Wayne County.

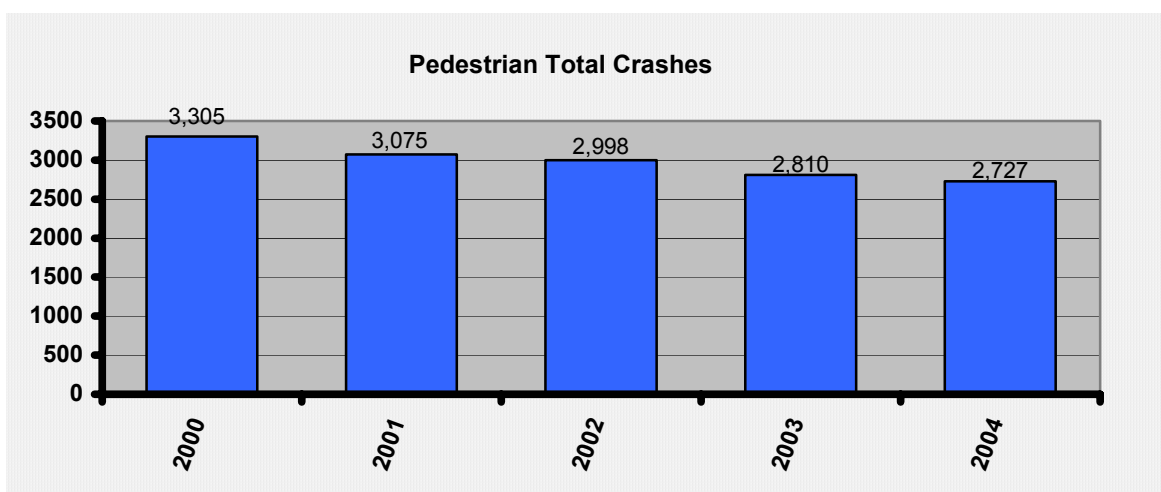
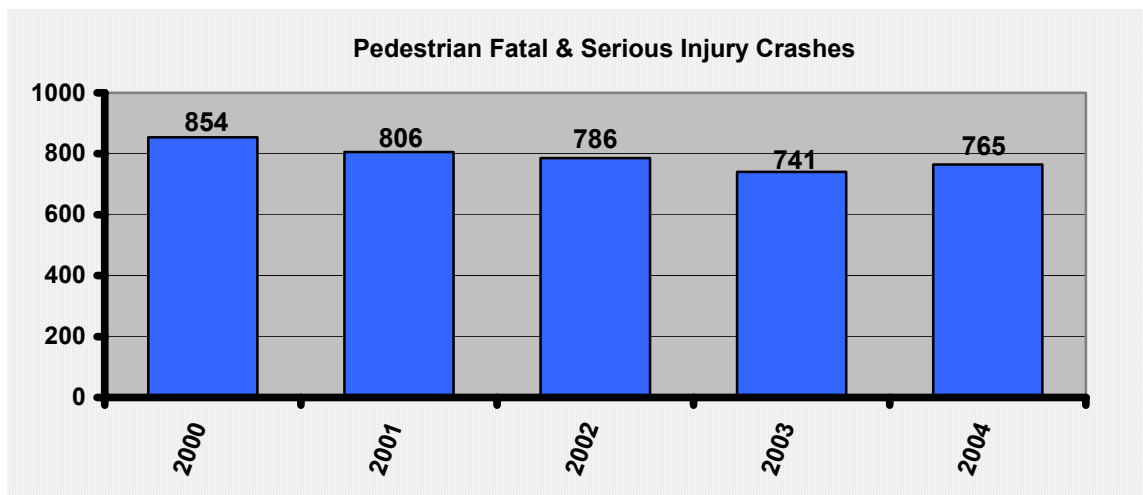
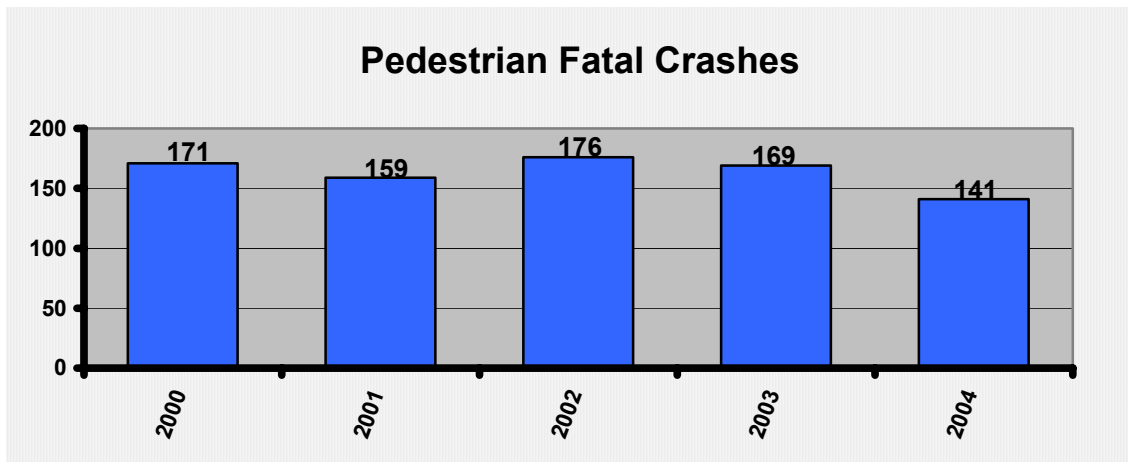
Pedestrian & Bicycle Safety Goal

The State of Michigan has adopted the AASHTO safety goal of reducing the overall fatality rate to 1.0 per 100 million vehicle miles traveled by 2008. For Michigan this goal translates into a 10.4 percent reduction (1,283 to 1,150) in fatalities and also a reduction in serious injuries (9,531 to 8,540). The goal of this Pedestrian & Bicycle Safety Action Plan is to outline a course of action that, when followed, will result in a comparable (10%) reduction in deaths and serious injuries to pedestrians and bicyclists in the year 2008, when compared to the average for years 2000-2004:

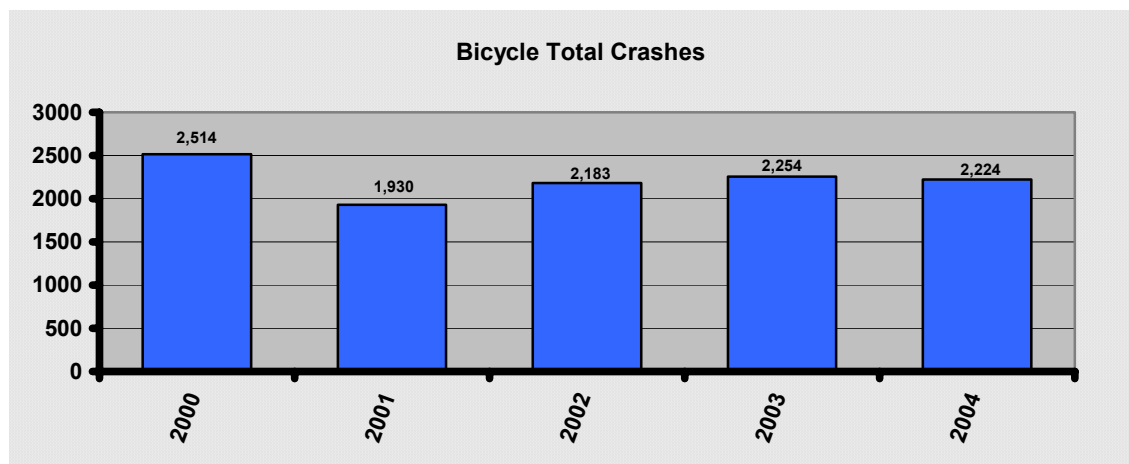
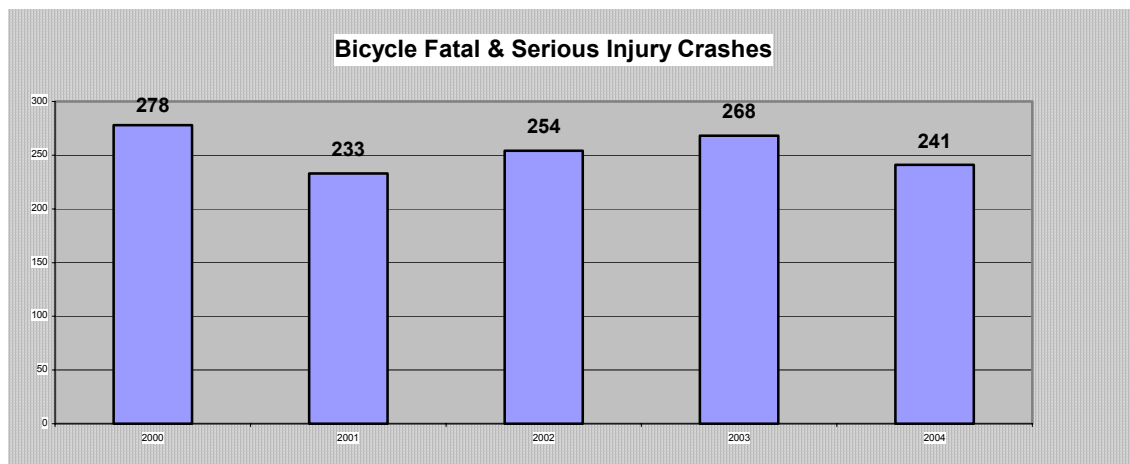
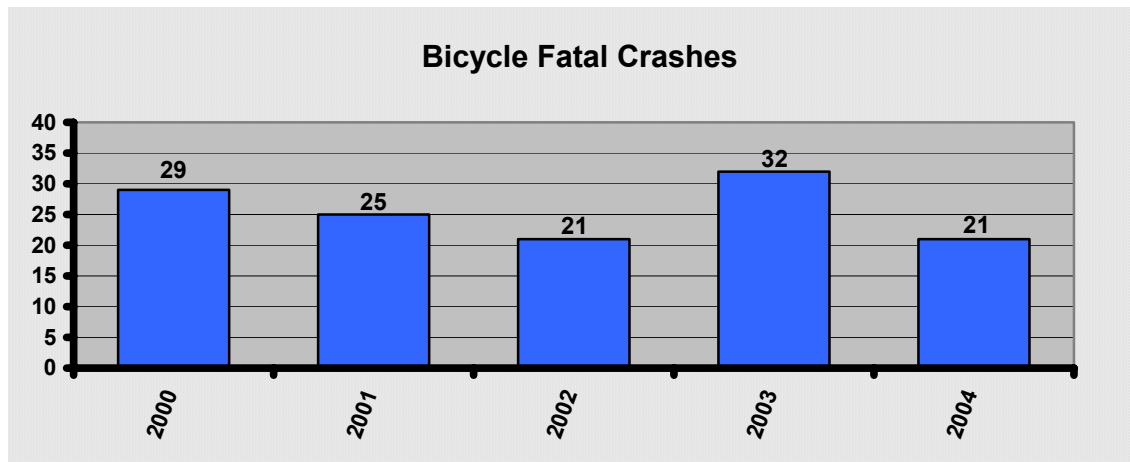
	2000-2004 avg	GOAL 2008
Pedestrian fatalities	163	147
Pedestrian KA*	790	711
Bicycle fatalities	25.6	23
Bicycle KA*	255	229

*KA = total fatalities and serious injuries

Michigan Pedestrian Crash Data



Michigan Bicycle Crash Data



Macro- strategies

LEGISLATIVE / POLITICAL OUTREACH

Strategies:

Provide recognition to jurisdictions and/or officials who have brought about a significant decrease in pedestrian and/or bicycle crashes.

Clarification of state pedestrian and bicycle laws.

Near-term Action Plan:

The Michigan Pedestrian and Bicycle Safety Action Team (Action Team) will promote annual awards that recognize actions to improve pedestrian and/or bicycle safety, and add them to the existing structure for awards presented at the annual Michigan Traffic Safety Summit. The Action Team will seek out, nominate and review candidates in this category.

The Action Team will review local, state and federal laws and evaluate if/where disparities exist.

SAFETY MANAGEMENT

Strategies:

Promote models and encourage a multi-disciplinary/multi-agency safety task group within the state and in each locality to address pedestrian and bicycle safety issues.

- Identify current activities by various groups or individuals
- Establish communication systems to share information and data.

Near-term Action Plan:

The Action Team will explore a web site that houses a clearinghouse of information on pedestrian and bicycle safety.

MDOT and OHSP will develop and promote a pedestrian/bicycle safety element as a core part of their ongoing initiative to promote safety-conscious planning at the MPO level:

- MDOT and OHSP will promote and support annual safety forums for each MPO area (with pedestrian and bicycle element)
- MDOT will encourage MPO's to monitor pedestrian and bicycle crashes in their region and identify for their constituent agencies the high-crash locations that might be pursued for development of safety projects
- MDOT will provide MPO's and counties with yearly pedestrian and bicycle crash data.

GTSAC will include a pedestrian/bicycle safety breakout session at the annual Michigan Traffic Safety Summit.

RESEARCH AND DATA

Strategies:

Identify issues and trends in Michigan pedestrian and bicycle crash data.

Research other states and agencies to develop a list of best practices for improving pedestrian and bicycle safety.

Determine best ways to evaluate pedestrian crash data.

Coordinate activities with the Michigan Transportation Research Board nonmotorized subcommittee.

Near-term Action Plan:

MDOT will analyze current crash data to determine the top intersection crash areas, types and other related issues.

SAFETY ANALYSIS TOOLS and PRACTICES

Strategies:

Conduct an inventory and analysis of existing pedestrian and bicycle safety analysis tools.

Institutionalize / promote the use of tools in the safety planning and roadway design process.

Provide traffic engineering safety support to local governments.

Pilot pedestrian and bicycle safety audits to review environmental and safety side of projects.

Near-term Action Plan:

The Action Team will review the ability of local agencies and MDOT to identify and analyze pedestrian and bicycle high crash locations:

- SEMCOG Crash Analysis Tool

- RoadSoft tools for use by local agencies
- Current MDOT tools and practices.

MDOT will include pedestrian and bicycle safety analysis as a component of their ongoing local support effort.

The Action Team will facilitate national pedestrian and/or bicycle safety training courses in Michigan for safety professionals.

The Action Team will facilitate training for ADA best practices.

ENGINEERING MEASURES

Strategies:

Target and increase pedestrian and bicycle safety funding at state and local level

- Increase safety program funds available for use by local governments.
- Encourage MPO assistance to provide data for regional and sub-regional analysis to constituent agencies

Review and implement as appropriate the strategies contained in the following documents and programs:

- NCHRP Report 500, Volume 10: A Guide for Reducing Collisions Involving Pedestrians
- AASHTO Guide for the Planning, Design, and Operation for Pedestrian Facilities
- ITE Alternative Treatments for At-Grade Pedestrian Crossings
- Salt Lake City pedestrian safety program

Establish funding mechanisms to institutionalize a strategic, statewide engineering approach to pedestrian and bicycle safety, at the state and local level including but not limited to:

- System-wide feature upgrades for identified desirable pedestrian or bicycle engineering or operational highway safety features (such as, sidewalks, countdown pedestrian signals, median or crosswalk refuge islands)
- Targeted safety efforts directed at individual urban areas
- Targeted safety efforts directed at “hot spot” locations within an urban or rural area

Near-term Action Plan:

GTSAC will promote an institutional approach to the design and construction of highway features that provide enhanced pedestrian or bicycle safety

- The Action Team will develop model safety-related highway design and operational practices for consideration by MDOT and local communities
- MDOT will review and change, as appropriate, design and funding policies that address pedestrian and bicycle safety-related features, such as sidewalk construction, pedestrian countdown signals, median and crosswalk refuge islands, marking schemes, etc
- MDOT will revise the MDOT Design Manual to include up to date pedestrian and bicycle accommodations.

- MDOT will Institutionalize bicycle and pedestrian accommodations into MDOT business practices
- MDOT will review and update as needed MDOT road/bridge standard plans for bicycle and pedestrian elements.

MDOT will consider establishment of a pedestrian and bicycle safety program for trunk line roads that

recognizes and promotes a variety of known engineering countermeasures.

- Sidewalk construction and maintenance
- Countdown pedestrian signals
- Various crosswalk marking schemes
- Median and crosswalk refuge islands

MDOT and OHSP will combine efforts to promote pedestrian and bicycle safety projects at the local level:

- Consider categorical safety funding to be reserved for local pedestrian and bicycle safety projects.
 - Targeted funding provided to high-crash jurisdictions for broad array of countermeasures.
 - Feature-related funding provided to localities throughout the state for systematic upgrade of safety-related highway features (marking schemes, signal treatments, refuge islands)
- Promote use of AASHTO pedestrian and bicycle guides to MDOT, local agencies, consultants and others.

ENFORCEMENT

Strategies:

Analyze current enforcement methods in relation to pedestrian and bicycle safety to determine possible improvements.

Include enforcement in the discussions when analyzing engineering and educational countermeasures.

Near-term Action Plan:

At future law enforcement forums/meetings OHSP and MSP will present traffic safety issues including pedestrian and bicycle safety.

The Action Team will work with OHSP to expand grant programs for communities to reduce pedestrian and bicycle safety issues.

Strategies:

Promote attendance at conferences or workshops, in which engineers, law enforcement, and safety professionals share information on the state of the practice on pedestrian and bicycle safety.

- Promote strong Michigan attendance at regional or national conferences or other collective efforts to discuss pedestrian and bicycle safety issues
- Support the efforts of the League of Michigan Bicyclists, Michigan Trails and Greenways Alliance, and other like organizations.

Near-term Action Plan:

The Action Team will develop a communication plan to disseminate information to officials in state, and local agencies and to the public.

- Communicate pedestrian and bicycle crash facts (e.g., demonstrate and illustrate the driver, bicyclist or pedestrian behavior that leads to various common pedestrian and bicycle crash types in Michigan)
- Use the GTSAC Listserv to communicate with all safety partners on pedestrian and bicycle issues.

The Action Team will seek resources to develop a training plan or provide for training resources on pedestrian and bicycle safety:

- Promote PPT presentation on highway features that affect pedestrian and bicycle safety.
- Promote awareness in pedestrian and bicyclists through efforts such as “What Every Bicyclist Should Know.”
- Develop a reference manual for pedestrian safety “What Every Pedestrian Must Know”

The Action Team will seek resources to develop a statewide media campaign regarding pedestrian and bicyclist safety that can be used by local agencies, and pilot in one or two specific local agencies:

- Develop and increases public awareness through editorials, radio, public service announcements, etc.
- Uses media to explain how to use new highway improvements or operational treatments, e.g. pedestrian count-down signals
- Uses media to provide safety arguments for enforcement activity

ACRONYMS

AAA	American Automobile Association
AASHTO	American Association of State Highway and Transportation Officials
ASLA	American Society of Landscape Architects
CDC	Centers for Disease Control and Prevention
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
GTSAC	Governor's Traffic Safety Advisory Commission
ITE	Institute of Transportation Engineers
MADD	Mothers Against Drunk Driving
MDCH	Michigan Department of Community Health
MDIT	Michigan Department of Information Technology
MDOS	Michigan Department of State
MDOT	Michigan Department of Transportation
MSA	Michigan Sheriff's Association
MSP	Michigan State Police
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
OHSP	Office of Highway Safety Planning
SEMCOG	Southeast Michigan Council of Governments
VMT	Vehicle miles traveled

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